

Importance of preliminary epidemiology studies in rural areas of developing countries

In developing countries, planning for provision of much needed neurological rehabilitation services is important. Lack of definition of the size of the problem of disability resulting from neurological disability often hinders adequate planning and provision of resources and services. Preliminary epidemiology studies on neurological disorders offer useful information upon which more comprehensive studies can be designed. The article "Neurological Disorders and Barriers for Neurological Rehabilitation in rural areas in Uttar Pradesh - a Cross-sectional Study" provides a useful preliminary insight into the surveillance and causes of neurological disorders as well as susceptible sections of the population in rural Uttar Pradesh.^[1] Surveillance identifies populations at risk, monitors disease, and highlights where a public health problem is likely to be the greatest.^[2] Once the incidence and prevalence of neurological diseases is known, it becomes easier to quantify the burden and cost of caring for people with neurological disorders. To reduce the burden and cost of long-term care it becomes vital to evaluate the availability and accessibility of primary care preventative services as well as neurological rehabilitation services for the identified rural population. Evaluating accessibility helps identify barriers, which limit the identified population from benefitting from recommended services. This article, "Neurological Disorders and Barriers for Neurological Rehabilitation in rural areas in Uttar Pradesh- a Cross Sectional Study", thus plugs a gap by identifying factors that hinder the affected population sample from accessing rehabilitation services.^[1]

Prevalence of neurological disorders in developing countries varies from one country to another. Studies in Ethiopia,^[3] Bengaluru in India,^[4] and Mozambique^[5] have mainly identified rural areas as being more prone to prevalence of neurological disorders. Where this

current study from Uttar Pradesh identifies poliomyelitis as being most prevalent, the studies in other developing countries identify seizures as being most prevalent in rural areas.^[3,5] This difference highlights the role played by age bracket in epidemiology. This study is of students and a working age population sample, whereas other cited studies^[3,5] included elderly members of the population. The study has brought polio back into the fore as a cause of neurological disability, especially when considering that an earlier study carried out in 1986 in rural Kashmir, India, ranked paralytic poliomyelitis as being the third most prevalent neurological disorder after epilepsy and stroke.^[6] With the successes of polio vaccinations in most countries, it would have been easy to assume that the incidence of polio has been eradicated worldwide. Another earlier study in a rural population of Eastern India found headache, vertebral disease, seizures, vertigo, and stroke as the most prevalent disorders.^[7]

Overall, the study has identified the risk of poliomyelitis-caused disability in the working age group of rural Uttar Pradesh as well as the barriers to accessing services. The study is a useful springboard from which more detailed studies, which specifically look at the proportionate size of the problem, can be carried out. It would be more interesting to know what percentage of the rural population of Uttar Pradesh experience poliomyelitis, cerebral palsy, stroke, and spinal cord injuries in any given period of time. The rate of incidence and prevalence, once minutely defined, would help plan for provision of services and removal of identified barriers such as individual lack of finance, poor awareness, family negligence, and lack of transportation.^[1] These barriers are taken for granted in developed countries where national health insurance cover is available for a majority of the population. The article highlights the relationship between poverty and disability. The identification of finance as the main barrier to accessing services provides evidence for this relationship. This is similar to the relationship between household food insecurity and symptoms of neurologic disorder noted in Ethiopia^[3] and also between low education, occupation, poor income, and neurological disorders in Bengaluru, India.^[4]

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Benjamin Chitambira

*Department of Physiotherapy, William Harvey Hospital,
East Kent Hospitals University
NHS Foundation Trust, England, UK*

Address for correspondence:

Mr. Benjamin Chitambira,
Department of Physiotherapy, William Harvey Hospital,
East Kent, Hospitals University NHS Foundation Trust,
Kennington Road, Ashford TN24 0LZ, England, UK.
E-mail: bchitambira@nhs.net

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